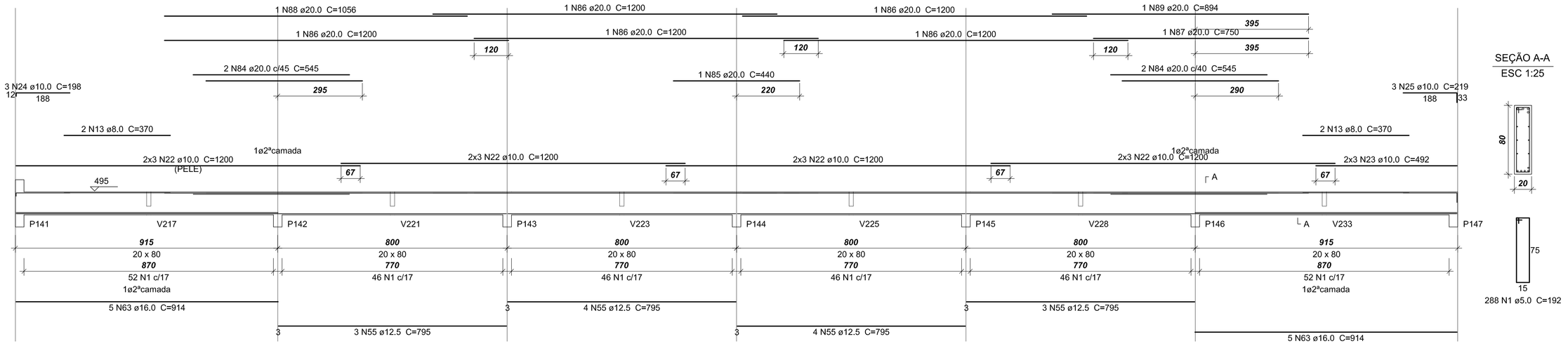
V209 (20 x 80)

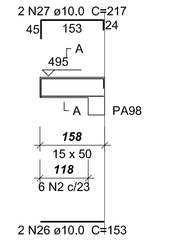
1:75



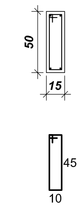
SEÇÃO A-A
ESC 1:25

V245 (15 x 50)

1:75

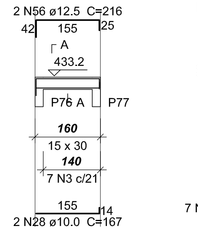


SEÇÃO A-A
ESC 1:25



V252 (15 x 30)

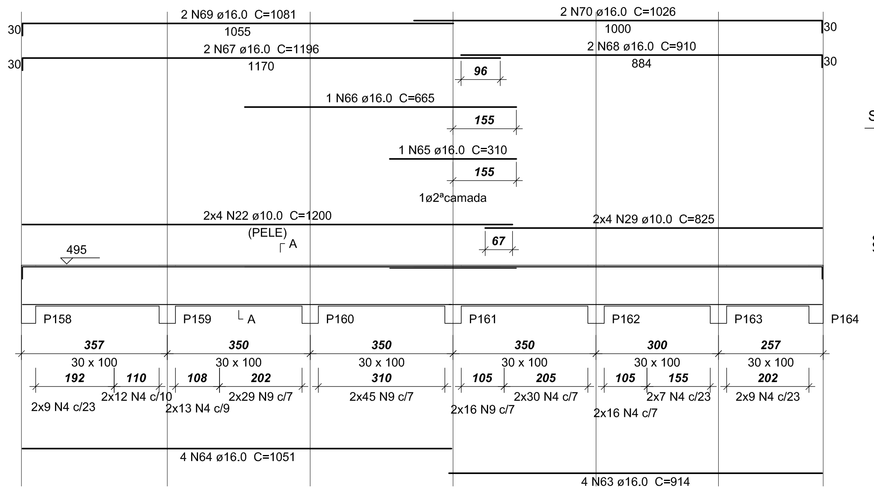
1:75



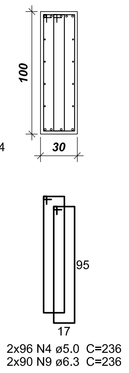
SEÇÃO A-A
ESC 1:25

V211 (30 x 100)

1:75

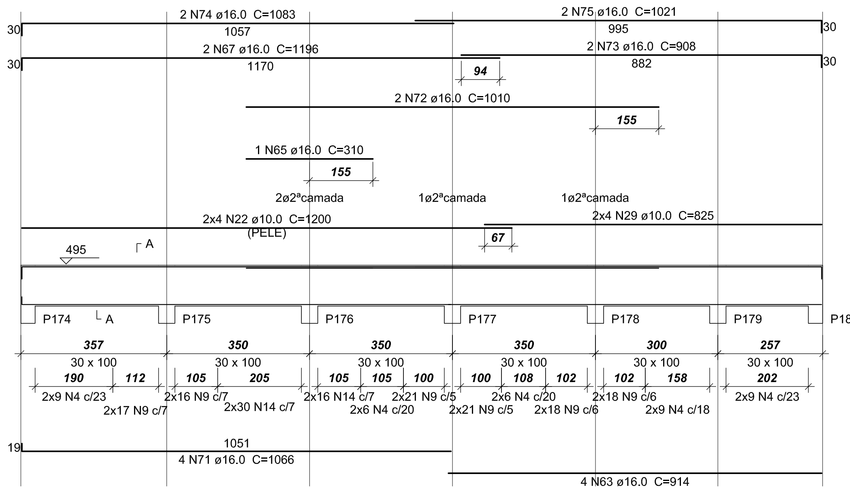


SEÇÃO A-A
ESC 1:25

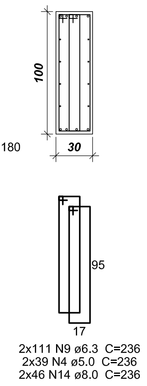


V213 (30 x 100)

1:75

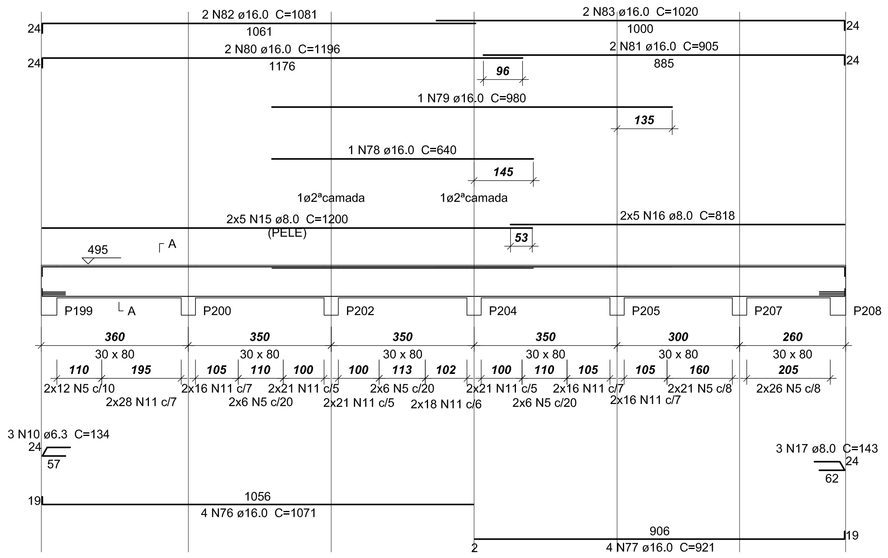


SEÇÃO A-A
ESC 1:25

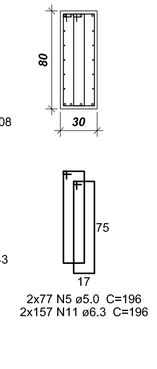


V214 (30 x 80)

1:75

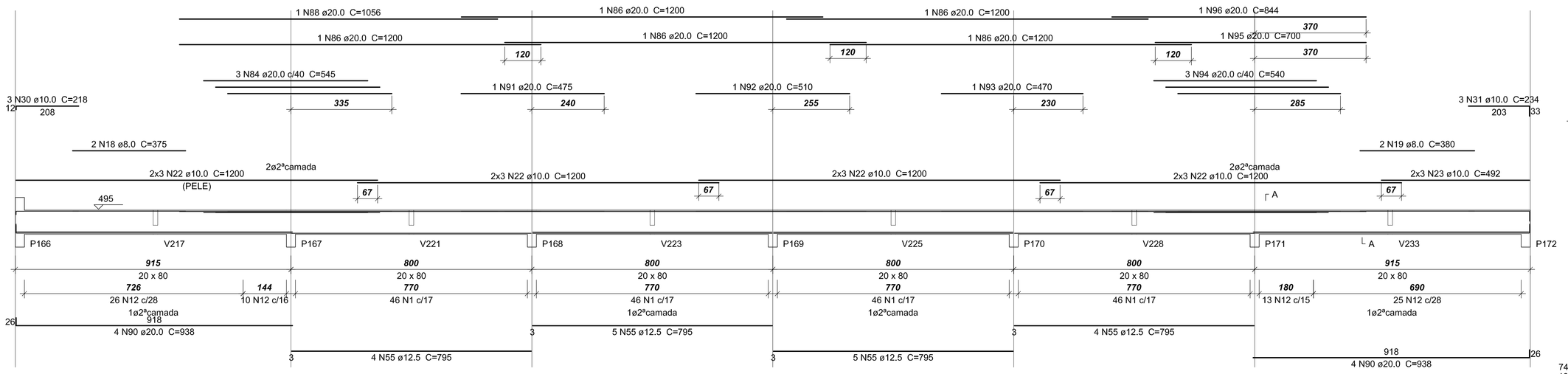


SEÇÃO A-A
ESC 1:25

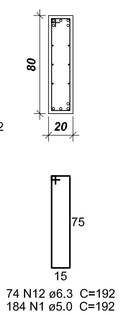


V212 (20 x 80)

1:75

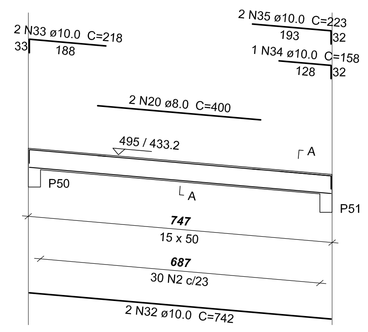


SEÇÃO A-A
ESC 1:25

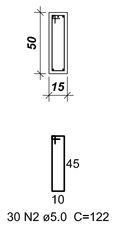


V249 (15 x 50)

1:75

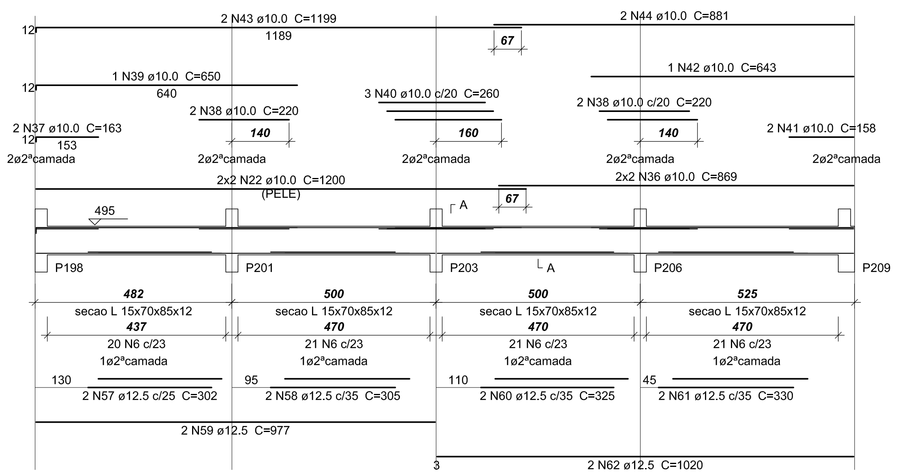


SEÇÃO A-A
ESC 1:25

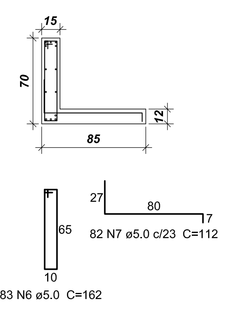


V215 (secao L 15x70x85x12)

1:75

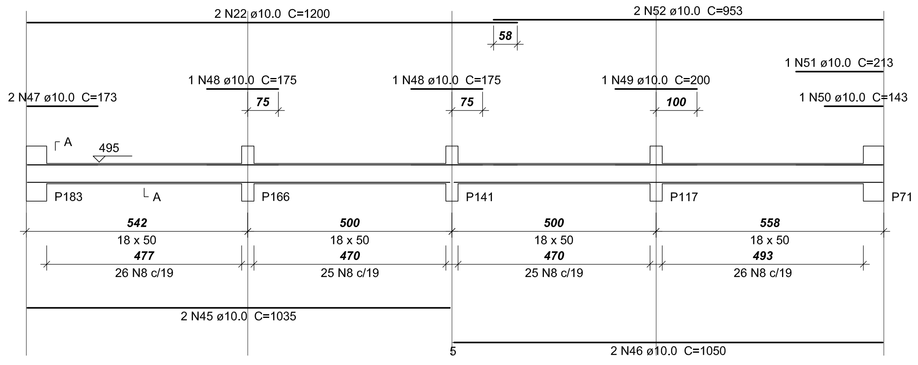


SEÇÃO A-A
ESC 1:25

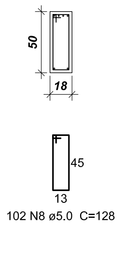


V216 (18 x 50)

1:75

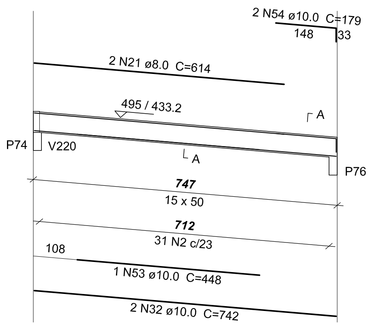


SEÇÃO A-A
ESC 1:25

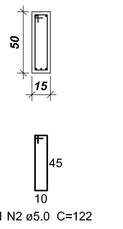


V250 (15 x 50)

1:75



SEÇÃO A-A
ESC 1:25



Relação do aço

AÇO	N	DIAM	Q	UNIT (cm)	C.TOTAL (cm)
CA60	1	5.0	472	192	90624
	2	5.0	67	122	8174
	3	5.0	7	82	574
	4	5.0	270	236	63720
	5	5.0	154	196	30184
	6	5.0	83	162	13446
	7	5.0	82	112	9184
	8	5.0	102	128	13056
CA50	9	6.3	402	236	94872
	10	6.3	3	134	402
	11	6.3	314	196	61544
	12	6.3	74	192	14208
	13	8.0	4	370	1480
	14	8.0	92	236	21712
	15	8.0	10	1200	12000
	16	8.0	10	818	8180
	17	8.0	3	143	429
	18	8.0	2	375	750
	19	8.0	2	380	760
	20	8.0	2	400	800
	21	8.0	2	614	1228
	22	10.0	70	1200	84000
	23	10.0	12	492	5904
	24	10.0	3	198	594
	25	10.0	3	219	657
	26	10.0	2	153	306
	27	10.0	2	217	434
	28	10.0	2	167	334
	29	10.0	16	825	13200
	30	10.0	3	218	654
	31	10.0	3	234	702
	32	10.0	4	742	2968
	33	10.0	2	218	436
	34	10.0	1	158	158
	35	10.0	2	223	446
	36	10.0	4	869	3476
	37	10.0	2	163	326
	38	10.0	4	220	880
	39	10.0	1	650	650
	40	10.0	3	260	780
	41	10.0	2	158	316
	42	10.0	1	643	643
	43	10.0	2	1199	2398
	44	10.0	2	881	1762
	45	10.0	2	1035	2070
	46	10.0	2	1050	2100
	47	10.0	2	173	346
	48	10.0	2	175	350
	49	10.0	1	200	200
	50	10.0	1	143	143
	51	10.0	1	213	213
	52	10.0	2	953	1906
	53	10.0	1	448	448
	54	10.0	2	179	358
	55	12.5	32	795	25440
	56	12.5	2	216	432
	57	12.5	2	302	604
	58	12.5	2	305	610
	59	12.5	2	977	1954
	60	12.5	2	325	650
	61	12.5	2	330	660
	62	12.5	2	1020	2040
	63	16.0	18	914	16452
	64	16.0	4	1051	4204
	65	16.0	2	310	620
	66	16.0	1	665	665
	67	16.0	4	1196	4784
	68	16.0	2	910	1820
	69	16.0	2	1081	2162
	70	16.0	2	1026	2052
	71	16.0	4	1066	4264
	72	16.0	2	1010	2020
	73	16.0	2	908	1816
	74	16.0	2	1083	2166
	75	16.0	2	1021	2042
	76	16.0	4	1071	4284
	77	16.0	4	921	3684
	78	16.0	1	640	640
	79	16.0	1	980	980
	80	16.0	2	1196	2392
	81	16.0	2	905	1810
	82	16.0	2	1081	2162
	83	16.0	2	1020	2040
	84	20.0	7	545	3815
	85	20.0	1	440	440
	86	20.0	10	1200	12000
	87	20.0	1	750	750
	88	20.0	2	1056	2112
	89	20.0	1	894	894
	90	20.0	8	938	7504
	91	20.0	1	475	475
	92	20.0	1	510	510
	93	20.0	1	470	470
	94	20.0	3	540	1620
	95	20.0	1	700	700
	96	20.0	1	844	844

Resumo do aço

AÇO	DIAM	C.TOTAL (m)	PESO (kg)
CA50	6,3	1710,3	418.5
	8,0	473.4	186.8
	10,0	1301.6	802.5
	12,5	323.9	312
	16,0	630.6	995.3
	20,0	321,4	792.5
CA60	5,0	2289.7	352.9
PESO TOTAL			
CA50	3507,6		
CA60	352.9		

Vol. de concreto total (C-30) = 37.91 m³
Área de forma total = 379,49 m²

V209	V211	V212
V213	V214	V215
V216	V245	V249
V250	V252	

AS BUILT PROJETOS
Rua Jovino do Rosário, 1564 – Boa Vista
CEP 82560-435 – Curitiba – Paraná

OBRA: GALPÃO DE ENGENHARIA – TEÓFILO OTONI
PROPRIETÁRIO: UNIVERSIDADE DOS VALES DO JEQUITINHONHA E MUCURI – UFVJM
ENDEREÇO: AVENIDA DR. LUIS BOALI PORTO SALMAN, S/Nº – BAIRRO IPIRANGA – TEÓFILO OTONI/MG

PROJETO ESTRUTURAL

REFERÊNCIA: FERRAGEM DAS VIGAS: PAVIMENTO TERREO (2)

PRANCHA: EST 16 de 20

ARQUIVO:
DESENHO: CARLOS
DATA: 27/09/2012
ESCALA: INDICADA

AUTOR DO PROJETO: ENG. CIVIL CARLOS HENRIQUE DE S. GONÇALVES CREA: 7.982-D/PR